

ABSTRACT

A method produces acetic acid by continuously reacting methanol with carbon monoxide in the presence of a rhodium catalyst, an iodide salt, methyl iodide, methyl acetate, and water; and thereby producing acetic acid at a production rate of 11 mol/L·hr or more while keeping the acetaldehyde content of a reaction mixture to 500 ppm or less, in which the reaction is carried out at a carbon monoxide partial pressure in a gaseous phase of a reactor of 1.05 MPa or more and/or at a methyl acetate content of the reaction mixture of 2 percent by weight or more to thereby keep the production rate of acetaldehyde to 1/1500 or less than that of acetic acid. This method can reduce production of by-products without reducing the reaction rate of acetic acid even at a low water content and a low hydrogen partial pressure in a reaction system.